which the mother happened to lay. Two days after this cessation labour came on unexpectedly, and the mother removed to the "Clinique d'Accouchements," where she was presently delivered of a male fœtus of the six and a half or seventh month, *covered with pustules of smallpox.* This fœtus presented unequivocal evidence of having been recently alive, and there was every reason to believe that it had had smallpox at the same time as its mother, and that it had died from this cause.—*Gaz. Med. de Paris,* Nov. 25, 1854.

## MEDICAL JURISPRUDENCE AND TOXICOLOGY.

71. *On the Detection of Strychnia.*—By Marshall Hall, M. D. The detection of strychnia as a poison is, at this moment, of deep public interest.

When the *chemical* test fails, there remains, I think, another—the *physiological.* Having long studied the effects of strychnia on the animal economy (I have sent two papers on this subject to the Institute of France[1]) I am persuaded that these effects on the *most excitable* of the animal species are at once the most delicate and specific tests of this poison.

I have just performed two experiments, and only two, for want of materials for more.

I requested Mr. Lloyd Bullock, of Hanover Street, to dissolve one part of the acetate of strychnia in one thousand parts of distilled water, adding a drop or two of acetic acid.

I then took a frog, and having added to one ounce of water 1-100th part of a grain of the acetate of strychnia, placed the frog in this dilute solution. No effect having been produced, 1-100th of a grain of the acetate was carefully added. This having produced no effect, in another hour 1-100th of a grain of the acetate was again added, making the 3-100ths, or about the thirty-third part of a grain. In a few minutes, the frog became violently tetanic, and though taken out and washed, died in the course of the night.

I thus detected, in the most indubitable manner, one thirty-third part of a grain of the acetate of strychnia. It appeared to me that had more time been given to the experiment, a much minuter quantity would be detectible.

I placed the second[2] frog in one ounce of distilled water, to which I had added the 1-200th part of a grain of the acetate of strychnia. At the end of the first, the second, and the third hours, other similar additions were made, no symptoms of strychnism having appeared. At the end of the fifth hour, the frog having been exposed to the action of 1-50th part of a grain of the acetate of strychnia, tetanus came on, and under the same circumstances of removal and washing, as in the former experiment, proved fatal in its turn.

I thus detected 1-50th part of a grain of the poisonous salt by phenomena too vivid to admit of a moment's doubt; the animal, on the slightest touch, became seized with the most rigid general spasmodic, or, rather, tetanoid rigidity. And this phenomenon, alternating with perfect relaxation, was repeated again and again.

As the nerve and muscles of the frog's leg, properly prepared, have been very aptly designated as galvanoscopic, so the whole frog, properly employed, becomes strychnoscopic.

In cases of suspected poison from strychnia, the contents of the stomach and intestines, and the contents of the heart, bloodvessels, etc., must be severally and carefully evaporated, and made to act on lively frogs just taken from the ponds or mud. I need scarcely say that, taken in winter, the frog will prove more strychnoscopic than in summer, in the early morning than in the evening.

The *best* mode of performing the experiment also remains to be discovered, with all its details and precautions; an inquiry into which I propose to enter shortly. Meantime, this note may not be without its utility.

Princes Street, Hanover Square, *January,* 1856.

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[1] See the Comptes Rendus for June, 1847, and February, 1853.

[2] These frogs were not fresh from the pools.

P. S.—I have repeated my experiment. I placed one frog, fresh from the pools, in an ounce of water, containing the 1-50th part of a grain of the acetate of strychnia; a second in the same quantity of water, containing the 1-60th, a third containing 1-100th, and a fourth containing 1-200th. All became tetanic in two or three hours, except the third, which was a *female* (the others being males), which required a longer time.

The 1-200th part of a grain of the acetate of strychnia is, therefore, detectable by means of this test conferred by physiology.

We now placed a male frog in 1-400th part of a grain of the acetate of strychnia, dissolved in six drachms of water. In three hours and a half it became violently tetanic.

The fresh frog is, therefore, at this season, strychnoscopic of 1-400th part of a grain of the acetate of strychnia, and probably to a much minuter quantity, which ulterior experiment must show.

In two other experiments, the 1-500th and the 1-1000th of a grain of the acetate of strychnia were detected.—*Lancet*, January 12, 1856.

72. *Poisonous Properties of Brine.* By M. Reynal.—The brine obtained from the process of salting various kinds of meat and fish is used by the lower classes in France as a condiment in place of common salt, and by farriers as a remedy for the diseases of domestic animals. Instances of poisoning, however, from its use having been noted in Germany, M. Reynal proceeded to investigate its action, and from a series of experiments detailed, draws the following conclusions: 1. That three or four months after its preparation, it acquires poisonous properties. 2. That the mean poisonous dose for the horse is two litres; for the hog, half a litre; and for the dog, one to two décilitres. 3. That in less doses it produces vomiting in the dog and hog. 4. That the employment of this substance mixed with the food, continued for a certain time, even in small quantity, may be fatal. These facts are important, when it is recollected that smoked meats and sausages have sometimes exhibited poisonous properties.—E. Ballard, in *B. and F. Med.-Ch. Rev.*, Jan. 1856.

## MISCELLANEOUS.

73. *On the Chemical Conditions of Cholera Atmospheres.* By Robert Dundas Thomson, M. D., F. R. S. L. & E., &c. &c.—The chemical conditions of cholera atmospheres is a question of intense interest in the subject of public health; but with the exception of the unpublished experiments of Dr. Prout, during the epidemic of 1832, comparatively little attention appears to have been bestowed on it. One of the most striking circumstances connected with the occurrence of the disease is, that no change very palpable to the senses prevails; and it has even been remarked, that the weather has usually been exceedingly agreeable. In London, at St. Thomas's Hospital, the neighbourhood of which afforded a large supply of cholera cases, the relative weight of the air in August, 1854—a cholera month—and in August, 1855, when the metropolis was in an exceedingly healthy condition, is exhibited in the following table in grains per cubic foot:—

| 1854. Week ending | Weight of cubic foot in grains. | 1855. Week ending | Weight of cubic foot in grains. |
|---|---|---|---|
| Aug. 5th | 522.9 | Aug. 4th | 516.9 |
| 12th | 526.7 | 11th | 524.3 |
| 19th | 525. | 18th | 525.9 |
| 26th | 523.5 | 25th | 519.2 |
| Sept. 2d | 525.2 | Sept. 1st | 523.0 |
| 9th | 530.3 | 8th | 531.6 |
| Mean | 525.6 | Mean | 523.5 |